ANNEX I

SUMMARY OF PRODUCT CHARACTERISTICS

# 1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Senvelgo 15 mg/ml oral solution for cats

# 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml contains:

# Active substance:

Velagliflozin equivalent to velagliflozin L-proline H<sub>2</sub>O 15 mg 20.1 mg

# **Excipients:**

Qualitative composition of excipients and other constituents
Ethanol (96%)
Propylene glycol
Citric acid monohydrate
Sodium hydroxide 1M
Honey flavour
Water, purified

Clear, colourless to slightly yellow to slightly brown solution

# 3. CLINICAL INFORMATION

# 3.1 Target species

Cats

# 3.2 Indications for use for each target species

For the reduction of hyperglycaemia in cats with non-insulin-dependent diabetes mellitus.

# 3.3 Contraindications

Do not use in cats with clinical signs of diabetic ketoacidosis (DKA) or laboratory values consistent with DKA. Do not use in cats with severe dehydration requiring i.v. fluid supplementation.

# 3.4 Special warnings

Asymptomatic hypoglycaemia based on single blood glucose measurements may be observed sporadically with velagliflozin treatment.

The safety and efficacy of a combined treatment with insulin or other blood glucose-lowering treatments and velagliflozin in cats has not been investigated.

Due to the mode of action of insulin there is an increased risk for hypoglycaemia, therefore combined treatment is not recommended.

Based on the mode of action, it is expected that cats being treated with SGLT-2 inhibitors will exhibit glucosuria. Therefore, the degree of glucosuria is not a reliable diagnostic indicator for monitoring glycaemic control. As glucosuria may persist for 2 to 3 days after discontinuation of the veterinary

medicinal product, blood glucose concentrations should be monitored to determine when diabetic treatment needs to be resumed.

Diabetic remission following velagliflozin was not investigated in the clinical field trials. Due to velagliflozin's mode of action, it may be difficult to identify cats which are in remission. If remission is suspected, consideration could be given to withdrawing treatment, but continuing other measures (e.g. low-carbohydrate diet, appropriate weight management) and closely monitoring glycaemic control and for return of clinical signs. If the cat relapses, then velagliflozin treatment can be restarted.

#### 3.5 Special precautions for use

Special precautions for safe use in the target species:

Based on the mode of action of SGLT-2 inhibitors (such as velagliflozin), adequate endogenous insulin production is a requirement for successful management of diabetes mellitus with this veterinary medicinal product.

Since there is no established threshold for endogenous insulin to conclude on sufficient availability, the following instructions are important to identify cats suitable for treatment start ("Prior to treatment start") and treatment continuation ("Initial monitoring recommendation (first two weeks)") to identify cats that benefit from monotherapy.

#### Prior to treatment start:

Screening for diabetic ketoacidosis (DKA) must be performed. Therefore, a check for ketone bodies in the urine or blood is required prior to use. Treatment should not be initiated or resumed, if ketone bodies at concentrations indicative of DKA are present.

Clinical signs such as unintended weight loss, dehydration, lethargy, anorexia (inappetence), vomiting, cachexia may indicate DKA.

Insulin pre-treated diabetic cats are at higher risk of DKA and ketonuria, compared to newly diagnosed patients, when started on velagliflozin.

Cats considered to be at risk of developing DKA need close monitoring and alternative treatment plans should be considered. The risk of developing DKA significantly decreases after the first two weeks of treatment, but DKA may occur any time (for monitoring see below).

If treatment start is delayed for more than four days after diagnosis of diabetes mellitus, the veterinarian should re-assess the risk for ketoacidosis.

Cats with co-morbidities such as pancreatitis, hepatic disease, infectious disease, cardiac disease, renal insufficiency (IRIS stage 3 or 4), neoplasia, hyperthyroidism, and acromegaly were excluded from clinical trials. Safety and efficacy of the veterinary medicinal product in diabetic cats with these co-morbidities has not been fully investigated. Use of the veterinary medicinal product in cats with co-morbidities is only according to the benefit-risk assessment by the prescribing veterinarian.

The following conditions should be resolved prior to treatment start: dehydration, suspected or confirmed DKA, anorexia, clinical pancreatitis, chronic diarrhoea, vomiting, cachexia.

#### Initial monitoring recommendations (first two weeks):

Discontinue treatment immediately in the event of confirmed or suspected diabetic ketoacidosis (DKA) or diabetic ketonuria and investigate accordingly.

Due to the mode of action of SGLT-2 inhibitors, hyperglycaemia may not be present in case of DKA (euglycaemic ketoacidosis). The diagnosis of euglycaemic DKA needs to be based on clinical signs, a laboratory finding of metabolic acidosis and other laboratory findings consistent with DKA.

In case of DKA (e.g., decreased appetite, acute vomiting, lethargy/depression, dehydration and laboratory findings), it is imperative to immediately initiate appropriate therapy. This includes the prompt initiation of insulin therapy despite normal blood glucose values (euglycaemic ketoacidosis),

while monitoring/treating for hypokalaemia. The initiation of insulin is needed to stop the progression of ketoacidosis. Administration of dextrose or other carbohydrate source and appropriate nutritional support in addition to insulin should be considered.

Checking for ketones is required at the initiation of therapy and every 1 to 3 days for the first two weeks as well as whenever the cat is showing clinical signs of illness, such as reduced food intake, acute vomiting or decreased activity. Screening for the presence of ketone bodies should ideally be performed on plasma at the veterinary clinic, but can be checked by the cat owner at home by dipping a respective urine test stripe into the cat's urine, e.g. in the cat litter. If ketones are detected, therapy should be discontinued and the cat evaluated by a veterinarian at once.

#### Routine monitoring recommendations:

Diabetes mellitus (DM) may progress over time, and thus some cats may require exogeneous insulin to prevent DKA. Therefore, cats with DM and treated with the veterinary medicinal product should be routinely monitored according to standard practice. In addition, due to the mode of action of velagliflozin, routine monitoring should include evaluation for ketones (via urinalysis or plasma), hydration status (osmotic diuresis) and bodyweight (unintended bodyweight loss due to persistent glucosuria).

Whenever clinical signs of DKA occur, the cat should be evaluated for the presence of ketone bodies (e.g. ketonuria and/or ketonaemia) indicating DKA. If the cat develops DKA, ketonuria or ketosis or if the cat's clinical condition declines or blood glucose or fructosamine values worsen after initial improvement, additional diagnostics or alternative therapies may be required. Evaluation of haematology, serum chemistry, urinalysis and hydration status are recommended.

Due to the mode of action, SGLT-2 inhibitors may cause an increase in serum creatinine, BUN, phosphorus and sodium within weeks of starting therapy, followed by a stabilization of values. Routine evaluation of renal function, bodyweight and hydration status in patients with renal disease is recommended. Cats with IRIS stage 1 and stage 2 kidney disease were included in the pivotal clinical trials.

# Further precautions for safe use:

Avoid contact with the cat's eyes.

Safety or efficacy of the veterinary medicinal product has not been established in cats younger than 1 year of age.

Urinary tract infection may occur due to glucosuria, caused by diabetes mellitus, or the effect of velagliflozin.

In case treatment-related side effects persist (e.g. diarrhoea), velagliflozin should be discontinued and alternative treatment for DM should be considered.

Cats may require temporary discontinuation of therapy in clinical situations known to predispose to ketoacidosis (e.g. anorexia [inappetence] due to acute illness or fasting around surgery).

# Special precautions to be taken by the person administering the veterinary medicinal product to animals:

Keep the filled syringe out of reach of children. This veterinary medicinal product can cause slight irritation to eyes. Avoid contact with eyes. If the product accidentally gets into the eyes, rinse eyes immediately and thoroughly with water.

Wash hands after use.

Accidental ingestion of velagliflozin may cause transient effects such as increased renal glucose excretion, increased urine volume and, potentially, reduced blood glucose concentration. In case of experiencing any side effect, e.g. after accidental ingestion, or if eye irritation occurs, seek medical advice immediately and show the package leaflet or the label to the physician.

<u>Special precautions for the protection of the environment:</u> Not applicable.

# 3.6 Adverse events

Cats:

Very common	Diarrhoea or loose stool <sup>1</sup>
(>1 animal / 10 animals treated):	Polydipsia or polyuria <sup>2</sup>
	Weight loss <sup>3</sup>
	Dehydration <sup>4</sup>
	Vomiting <sup>5</sup>
Common	Diabetic ketoacidosis (DKA) <sup>6</sup>
(1 to 10 animals / 100 animals treated):	Diabetic ketonuria <sup>6</sup>
	Urinary tract infection (UTI)
	Hypersalivation <sup>7</sup>
	Hypercalcaemia <sup>8</sup>

- <sup>1</sup> Diarrhoea or loose stool may be transient. Supportive treatment can help resolve gastrointestinal signs. In case treatment-related diarrhoea persists, treatment should be discontinued and alternative treatments considered. See also sections 3.3 and 3.5.
- <sup>2</sup> Polydipsia or polyuria may occur as part of the underlying disease or may be enhanced due to the osmotic effect of velagliflozin.
- <sup>3</sup> Weight loss may occur as part of the underlying disease. An initial weight loss may occur due to the glucosuric effect of velagliflozin. If weight loss persists, screening for DKA should be performed. See also sections 3.3 and 3.5.
- <sup>4</sup> Severe dehydration should lead to screening for DKA. Appropriate supportive fluid therapy should be given as needed. See also sections 3.3 and 3.5.
- <sup>5</sup> Vomiting is usually sporadic and resolves without specific therapy. Acute or more frequent vomiting may also be a sign of clinical DKA or other severe disease conditions and should be investigated accordingly. See also sections 3.3 and 3.5.
- <sup>6</sup> In case of DKA or diabetic ketonuria: Stop treatment and initiate insulin therapy. See also sections 3.3 and 3.5.
- <sup>7</sup> Hypersalivation occurs usually only at initial administrations, immediately after dosing, and does not need specific therapy.
- <sup>8</sup> Hypercalcaemia is normally mild, with calcium levels staying close to the reference range, and does not need specific therapy.

Reporting adverse events is important. It allows continuous safety monitoring of a veterinary medicinal product. Reports should be sent, preferably via a veterinarian, to either the marketing authorisation holder or its local representative or the national competent authority via the national reporting system. See the package leaflet for respective contact details.

# 3.7 Use during pregnancy, lactation or lay

The safety of the veterinary medicinal product has not been established during breeding, pregnancy or lactation. Use only according to the benefit-risk assessment by the responsible veterinarian.

# 3.8 Interactions with other medicinal products and other forms of interaction

Drug-drug interactions have not been investigated in vivo.

Concomitant treatment with diuretics has not been evaluated. Due to the pharmacodynamic effect of Senvelgo, which may induce mild osmotic diuresis, concomitant treatment with diuretics may have a potential synergistic effect.

The concomitant use of Senvelgo and insulin or other blood glucose lowering treatments has not been investigated. (see section 3.4).

#### **3.9** Administration routes and dosage

Oral use.

The recommended dose is 1 mg/kg bodyweight administered once daily. For cats previously treated with insulin/another anti-diabetic medicinal product the dosing regimen is the same. When transitioning from insulin, omit the insulin evening dose from the day before starting the velagliflozin treatment.

The solution should be drawn using the dosing syringe provided in the package. The syringe fits onto the bottle and has a kg bodyweight scale. The veterinary medicinal product may be administered either directly into the mouth or with a small amount of food.

The veterinary medicinal product should be given at approximately the same time every day. If a dose is missed, it should be given as soon as possible on the same day. After administration close bottle tightly with the cap. The syringe can be cleaned with a clean, dry cloth. The syringe has a kg bodyweight scale with 0.5 kg increments.

# 3.10 Symptoms of overdose (and where applicable, emergency procedures and antidotes)

In a 90-day tolerance study evaluating repeated dose of 1, 3 and 5 mg/kg velagliflozin a dose dependent softening of stool was observed.

In 9-month-old adult cats with repeated overdose of up to 5 times the highest recommended dose of 1 mg velagliflozin per kg bodyweight for 180 days, a reduced weight gain was noted. Therefore, weight gain in growing cats may be reduced if consistent overdosing occurs over a long period of time. Water uptake was increased under treatment with velagliflozin.

A transient increase of mean triglyceride and increased mean cholesterol values were noted in all treatment groups. Both remained within the respective reference range of historical controls in healthy animals and are of minor clinical relevance.

# **3.11** Special restrictions for use and special conditions for use, including restrictions on the use of antimicrobial and antiparasitic veterinary medicinal products in order to limit the risk of development of resistance

Not applicable.

# 3.12 Withdrawal periods

Not applicable.

# 4. PHARMACOLOGICAL INFORMATION

# 4.1 ATCvet code:

# QA10BK90

# 4.2 Pharmacodynamics

Velagliflozin is a highly selective inhibitor of the sodium-glucose co-transporter 2 (SGLT-2), which is predominantly expressed in the kidney. Velagliflozin also has a minor inhibitory effect on the SGLT-1, which is predominantly expressed in the small intestine, but also expressed at a lower level in the kidneys. SGLT-2 is the primary transporter for the reabsorption of glucose from the urine, with around 90% of filtered glucose reabsorbed by SGLT-2 and 10% reabsorbed by SGLT-1. Inhibition of SGLT-2 leads to glucose elimination in the urine resulting in a decrease in elevated blood glucose levels in diabetic cats. The reduction of hyperglycaemia is usually observed within 7 days after start of treatment. A low level of glucose will continue to be resorbed via incomplete inhibition of SGLT-1, which reduces the risk for clinical hypoglycaemia. This minor inhibitory action on SGLT-1 can also contribute to a dose-dependent softening of stool and loose stool/ diarrhoea due to the expression of SGLT-1 in the small intestine.

In a European clinical field trial, the safety and efficacy of 1 mg/kg once daily oral velagliflozin in diabetic cats was evaluated and compared to twice daily veterinary licensed porcine insulin therapy (individual dose adjustment) over 91 days.

The efficacy assessment was performed after 45 treatment days and the case was considered a success, if an animal showed a combined improvement in at least one clinical sign related to diabetes (e.g. water uptake, urination volume and frequency, diabetic polyneuropathy and appetite) and an improvement in at least one glycaemic laboratory parameter (mean blood glucose of the blood glucose curve  $\leq 250 \text{ mg/dl}$ , min blood glucose  $\leq 160 \text{ mg/dl}$  and serum fructosamine  $\leq 450 \mu \text{mol/l}$ ). Treatment-naïve as well as insulin pre-treated diabetic cats were enrolled. The study confirmed that velagliflozin was non-inferior to porcine lente insulin. Treatment success rate on day 45 for cats treated once daily with velagliflozin was 53.7%, whereas it was 41.9% for twice daily porcine lente insulin injections. Improvement in glycaemic laboratory parameters was seen in a greater proportion of velagliflozin-treated cats compared to insulin-treated cats at day 7 (80% velagliflozin group, 42% insulin group) and at each subsequent timepoint throughout the study.

In a US clinical field trial, the safety and efficacy of 1 mg/kg/day velagliflozin was evaluated in newly diagnosed diabetic cats as well as in a limited number of cats previously treated with insulin. The study design utilized baseline control with all enrolled cats receiving velagliflozin. In this trial, 88.4% of the cats treated with velagliflozin and included in the efficacy analysis met the requirement for treatment success on day 30.

The composite variable "treatment success" was comprised of an improvement in at least one clinical sign related to diabetes mellitus (polyuria, polydipsia, unintended weight loss, polyphagia, or diabetic neuropathy) and improvement in at least one glycaemic variable in comparison to the screening visit (either the mean of the blood glucose curve, which also had to be  $\leq 300 \text{ mg/dl}$ , or serum fructosamine, which also had to be  $\leq 450 \mu \text{mol/l}$ ).

# 4.3 Pharmacokinetics

# Absorption:

After oral administration of 1 mg/kg velagliflozin to fasted cats, plasma-concentration-time curves are characterised by rapid absorption with maximum plasma concentrations ( $C_{max}$ ) achieved after 0.6 to 1 hours ( $T_{max}$ ). The mean  $C_{max}$  ranged from 1,293 to 2,161 ng/ml and the mean areas under the curve within 24 hours (AUC<sub>0-24 h</sub>) ranged from 6,944 to 11,035 h\*ng/ml.

After oral administration of velagliflozin to fed cats plasma-concentration-time curves are characterised by slightly delayed absorption, with  $C_{max}$  achieved after 1 to 3.67 hours ( $T_{max}$ ). The mean

 $C_{max}$  ranged from 316 to 846 ng/ml and the mean areas under the curve within 24 hours (AUC<sub>0-24 h</sub>) ranged from 2,786 to 7,142 h\*ng/ml.

In summary, although fasted cats showed a higher  $C_{max}$  and shorter  $T_{max}$ , resulting in a higher exposure (AUC<sub>0-24 h</sub>) compared to cats in fed state, this is not considered to be of clinical relevance.

After repeat daily oral administration of 1, 3 and 5 mg/kg velagliflozin to cats over six months, a slight increase of exposure (range: 1.3 to 1.9-fold) was observed. In addition, a tendency for a less than dose-proportional increase of exposure (AUC) and  $C_{max}$  was observed for all dose levels.

No relevant difference in exposure was observed between male and female cats. Velagliflozin showed an absolute bioavailability of 96% in fasted cats after oral administration.

#### Distribution:

An *in vitro* study using cat plasma showed a high (93%) plasma protein binding. An *in vitro* study using cat whole blood showed partitioning of velagliflozin into red blood cells was moderate. Blood cell concentration versus plasma concentration ratio  $(C_{bc}/C_p)$  was 0.84. Pharmacokinetics after intravenous administration to cats showed a volume of distribution  $(V_{ss})$  similar to that of total body water indicating distribution of velagliflozin into tissue.

#### Metabolism:

The primary metabolic pathways observed in cats after oral administration of velagliflozin were oxidation, a combination of oxidation and dehydrogenation and sulfate conjugation.

#### Elimination:

After oral administration (fed/fasted), mean half-life ( $T_{1/2}$ ) ranged from 4.5 to 6.4 hours. After oral administration to cats, velagliflozin was primarily excreted unchanged in faeces. Only minor renal excretion occurred (approx. 4%).

# 5. PHARMACEUTICAL PARTICULARS

# 5.1 Major incompatibilities

In the absence of compatibility studies, this veterinary medicinal product must not be mixed with other veterinary medicinal products

# 5.2 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 3 years. Shelf life after first opening the immediate packaging: 6 months.

#### 5.3 Special precautions for storage

This veterinary medicinal product does not require any special storage conditions.

# 5.4 Nature and composition of immediate packaging

Translucent high-density polyethylene (HDPE) bottle containing 30 ml of oral solution with a translucent low-density polyethylene (LDPE) plug-in adapter and a child resistant closure.

Translucent high-density polyethylene (HDPE) bottle containing 12 ml of oral solution with a translucent low-density polyethylene (LDPE) plug-in adapter and a child resistant closure.

Dosing syringe of 0.6 ml consisting of a white plunger with a kg bodyweight scale (0.5 kg increments) within a translucent barrel.

Each cardboard box contains one bottle and one dosing syringe.

# 5.5 Special precautions for the disposal of unused veterinary medicinal product or waste materials derived from the use of such products

Medicines should not be disposed of via wastewater or household waste.

Use take-back schemes for the disposal of any unused veterinary medicinal product or waste materials derived thereof in accordance with local requirements and with any national collection systems applicable to the veterinary medicinal product concerned.

# 6. NAME OF THE MARKETING AUTHORISATION HOLDER

Boehringer Ingelheim Vetmedica GmbH

# 7. MARKETING AUTHORISATION NUMBER(S)

EU/2/23/305/001-002

# 8. DATE OF FIRST AUTHORISATION

20/11/2023

# 9. DATE OF THE LAST REVISION OF THE SUMMARY OF THE PRODUCT CHARACTERISTICS

# 10. CLASSIFICATION OF VETERINARY MEDICINAL PRODUCTS

Veterinary medicinal product subject to prescription.

Detailed information on this veterinary medicinal product is available in the Union Product Database. (https://medicines.health.europa.eu/veterinary).

ANNEX II

OTHER CONDITIONS AND REQUIREMENTS OF THE MARKETING AUTHORISATION

# OTHER CONDITIONS AND REQUIREMENTS OF THE MARKETING AUTHORISATION

# SPECIFIC PHARMACOVIGILANCE REQUIREMENTS:

The MAH shall record in the pharmacovigilance database all results and outcomes of the signal management process, including a conclusion on the benefit-risk balance, according to the following frequency: Every 6 months for the first 2 years after authorisation.

ANNEX III

LABELLING AND PACKAGE LEAFLET

A. LABELLING

# PARTICULARS TO APPEAR ON THE OUTER PACKAGE

Cardboard box

# 1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Senvelgo 15 mg/ml oral solution for cats

#### 2. STATEMENT OF ACTIVE SUBSTANCES

Each ml contains: Velagliflozin: 15 mg (equivalent to velagliflozin L-proline H<sub>2</sub>O: 20.1 mg)

#### 3. PACKAGE SIZE

12 ml 30 ml 1 syringe

# 4. TARGET SPECIES

Cats

# 5. INDICATIONS

# 6. ROUTES OF ADMINISTRATION

Oral use.

# 7. WITHDRAWAL PERIODS

# 8. EXPIRY DATE

Exp. {mm/yyyy}

# 9. SPECIAL STORAGE PRECAUTIONS

# 10. THE WORDS "READ THE PACKAGE LEAFLET BEFORE USE"

Read the package leaflet before use.

# 11. THE WORDS "FOR ANIMAL TREATMENT ONLY"

For animal treatment only.

# 12. THE WORDS "KEEP OUT OF THE SIGHT AND REACH OF CHILDREN"

Keep out of the sight and reach of children.

# 13. NAME OF THE MARKETING AUTHORISATION HOLDER

Boehringer Ingelheim Vetmedica GmbH

# 14. MARKETING AUTHORISATION NUMBERS

EU/2/23/305/001 EU/2/23/305/002

#### **15. BATCH NUMBER**

Lot {number}

info.senvelgo.com/eu



# MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS Bottle/HDPE

# 1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Senvelgo

# 2. QUANTITATIVE PARTICULARS OF THE ACTIVE SUBSTANCES

Velagliflozin: 15 mg/ml (equivalent to velagliflozin L-proline H<sub>2</sub>O: 20.1 mg/ml)

# **3. BATCH NUMBER**

Lot {number}

# 4. EXPIRY DATE

Exp. {mm/yyyy}

**B. PACKAGE LEAFLET** 

# PACKAGE LEAFLET

# **1.** Name of the veterinary medicinal product

Senvelgo 15 mg/ml oral solution for cats

# 2. Composition

Each ml contains:

Active substance:	
Velagliflozin	15 mg
equivalent to velagliflozin L-proline H <sub>2</sub> O	20.1 mg

Clear, colourless to slightly yellow to slightly brown solution

# 3. Target species

Cats

# 4. Indications for use

For the reduction of hyperglycaemia in cats with non-insulin-dependent diabetes mellitus.

# 5. Contraindications

Do not use in cats with clinical signs of diabetic ketoacidosis (DKA) or laboratory values consistent with DKA. Do not use in cats with severe dehydration requiring i.v. fluid supplementation.

# 6. Special warnings

Asymptomatic hypoglycaemia based on single blood glucose measurements may be observed sporadically with velagliflozin treatment.

The safety and efficacy of a combined treatment with insulin or other blood glucose-lowering treatments and velagliflozin in cats has not been investigated. Due to the mode of action of insulin, there is an increased risk for hypoglycaemia, therefore combined treatment is not recommended.

Based on the mode of action, it is expected that cats being treated with SGLT-2 inhibitors will exhibit glucosuria. Therefore, the degree of glucosuria is not a reliable diagnostic indicator for monitoring glycaemic control. As glucosuria may persist for 2 to 3 days after discontinuation of the veterinary medicinal product, blood glucose concentrations should be monitored to determine when diabetic treatment needs to be resumed.

Diabetic remission following velagliflozin was not investigated in the clinical field trials. Due to velagliflozin's mode of action, it may be difficult to identify cats which are in remission. If remission is suspected, consideration could be given to withdrawing treatment, but continuing other measures (e.g. low-carbohydrate diet, appropriate weight management) and closely monitoring glycaemic control and for return of clinical signs. If the cat relapses, then velagliflozin treatment can be restarted.

#### Special precautions for safe use in the target species:

Based on the mode of action of SGLT-2 inhibitors (such as velagliflozin), adequate endogenous insulin production is a requirement for successful management of diabetes mellitus with this veterinary medicinal product.

Since there is no established threshold for endogenous insulin to conclude on sufficient availability, the following instructions are important to identify cats suitable for treatment start ("Prior to treatment start") and treatment continuation ("Initial monitoring recommendation (first two weeks)") to identify cats that benefit from monotherapy.

#### Prior to treatment start:

Screening for diabetic ketoacidosis (DKA) must be performed. Therefore, a check for ketone bodies in the urine or blood is required prior to use. Treatment should not be initiated or resumed, if ketone bodies at concentrations indicative of DKA are present.

Clinical signs such as unintended weight loss, dehydration, lethargy, anorexia (inappetence), vomiting, cachexia may indicate DKA. Insulin pre-treated diabetic cats-are at higher risk for DKA and ketonuria, compared to newly diagnosed patients, when started on velagliflozin.

Cats considered to be at risk of developing DKA need close monitoring and alternative treatment plans should be considered. The risk of developing DKA significantly decreases after the first two weeks of treatment, but DKA may occur any time (for monitoring see below).

If treatment start is delayed for more than four days after diagnosis of diabetes mellitus, the veterinarian should re-assess the risk for ketoacidosis.

Cats with co-morbidities such as pancreatitis, hepatic disease, infectious disease, cardiac disease, renal insufficiency (IRIS stage 3 or 4), neoplasia, hyperthyroidism, and acromegaly were excluded from clinical trials. Safety and efficacy of the veterinary medicinal product in diabetic cats with these co-morbidities has not been fully investigated. Use of the veterinary medicinal product in cats with co-morbidities is only according to the benefit-risk assessment by the prescribing veterinarian.

The following conditions should be resolved prior to treatment start: dehydration, suspected or confirmed DKA, anorexia, clinical pancreatitis, chronic diarrhoea, vomiting, cachexia.

#### Initial monitoring recommendations (first two weeks):

Discontinue treatment immediately in the event of confirmed or suspected diabetic ketoacidosis (DKA) or diabetic ketonuria, and investigate accordingly.

Due to the mode of action of SGLT-2 inhibitors, hyperglycaemia may not be present in case of DKA (euglycaemic ketoacidosis). The diagnosis of euglycaemic DKA needs to be based on clinical signs, a laboratory finding of metabolic acidosis and other laboratory findings consistent with DKA.

In case of DKA (e.g. decreased appetite, acute vomiting, lethargy/depression, dehydration and laboratory findings), it is imperative to then immediately initiate appropriate therapy. This includes the prompt initiation of insulin therapy despite normal blood glucose values (euglycaemic ketoacidosis), while monitoring/treating for hypokalaemia. The initiation of insulin is needed to stop the progression of ketoacidosis. Administration of dextrose or other carbohydrate source and appropriate nutritional support in addition to insulin should be considered.

Checking for ketones is required at the initiation of therapy and every 1 to 3 days for the first two weeks as well as whenever the cat is showing clinical signs of illness, such as reduced food intake, acute vomiting, or decreased activity. Screening for the presence of ketone bodies should ideally be performed on plasma at the veterinary clinic, but can be checked by the cat owners at home by dipping a respective urine test stripe into the cat's urine, e.g., in the cat litter. If ketones are detected, therapy should be discontinued and the cat evaluated by a veterinarian at once.

#### Routine monitoring recommendations:

Diabetes mellitus (DM) may progress over time, and thus some cats may require exogeneous insulin to prevent DKA. Therefore, cats with DM and treated with the veterinary medicinal product should be routinely monitored according to standard practice. In addition, due to the mode of action of velagliflozin, routine monitoring should include evaluation for ketones (via urinalysis or plasma), hydration status (osmotic diuresis) and bodyweight (unintended bodyweight loss due to persistent glucosuria).

Whenever clinical signs of DKA occur, the cat should be evaluated for the presence of ketone bodies (e.g. ketonuria and/or ketonemia) indicating DKA. If the cat develops DKA, ketonuria or ketosis or if the cat's clinical condition declines or blood glucose or fructosamine values worsen after initial improvement, additional diagnostics or alternative therapies may be required. Evaluation of haematology, serum chemistry, urinalysis, and hydration status are recommended.

Due to the mode of action, SGLT-2 inhibitors may cause an increase in serum creatinine, BUN, phosphorus, and sodium within weeks of starting therapy, followed by a stabilization of values. Routine evaluation of renal function, bodyweight and hydration status in patients with renal disease is recommended. Cats with IRIS stage 1 and stage 2 kidney disease were included in the pivotal clinical trials.

#### Further precautions for safe use:

Avoid contact with the cat's eyes.

Safety or efficacy of the veterinary medicinal product has not been established in cats younger than 1 year of age.

Urinary tract infection may occur due to glucosuria, caused by diabetes mellitus, or the effect of velagliflozin.

In case treatment-related side effects persist (e.g. diarrhoea), velagliflozin should be discontinued and alternative treatment for DM should be considered.

Cats may require temporary discontinuation of therapy in clinical situations known to predispose to ketoacidosis (e.g. anorexia [inappetence] due to acute illness, or fasting around surgery).

# Special precautions to be taken by the person administering the veterinary medicinal product to animals:

Keep the filled syringe out of reach of children. This veterinary medicinal product can cause slight irritation to eyes. Avoid contact with eyes. If the product accidentally gets into the eyes, rinse eyes immediately and thoroughly with water.

Wash hands after use.

Accidental ingestion of velagliflozin may cause transient effects such as increased renal glucose excretion, increased urine volume and, potentially, reduced blood glucose concentration. In case of experiencing any side effect, e.g. after accidental ingestion, or if eye irritation occurs, seek medical advice immediately and show the package leaflet or the label to the physician.

#### Pregnancy and lactation:

The safety of the veterinary medicinal product has not been established during breeding, pregnancy or lactation. Use only according to benefit-risk assessment by the responsible veterinarian.

Interactions with other medicinal products and other forms of interaction: Drug-drug interactions have not been investigated *in vivo*. Concomitant treatment with diuretics has not been evaluated. Due to the pharmacodynamic effect of Senvelgo, which may induce mild osmotic diuresis, concomitant treatment with diuretics may have a potential synergistic effect.

The concomitant use of Senvelgo and insulin or other blood glucose lowering treatments has not been investigated. (see section "Special warnings").

#### Overdose:

In a 90-days tolerance study evaluating repeated dose of 1, 3 and 5 mg/kg velagliflozin a dose dependent softening of stool was observed.

In 9-month-old adult cats with repeated overdose of up to 5 times the highest recommended dose of 1 mg velagliflozin per kg bodyweight for 180 days, a reduced weight gain was noted. Therefore, weight gain in growing cats may be reduced if consistent overdosing occurs over a long period of time. Water uptake was increased under treatment with velagliflozin.

A transient increase of mean triglyceride and increased mean cholesterol values were noted in all treatment groups. Both remained within the respective reference range of historical controls in healthy animals and are of minor clinical relevance.

#### Major incompatibilities

In the absence of compatibility studies, this veterinary medicinal product must not be mixed with other veterinary medicinal products.

# 7. Adverse events

Cats:

Very common (>1 animal / 10 animals treated):
Diarrhoea or loose stool <sup>1</sup>
Polydipsia or polyuria <sup>2</sup>
Weight loss <sup>3</sup>
Dehydration <sup>4</sup>
Vomiting <sup>5</sup>
<b>Common</b> (1 to 10 animals / 100 animals treated):
Diabetic ketoacidosis (DKA) <sup>6</sup>
Diabetic ketonuria <sup>6</sup>
Urinary tract infection (UTI)
Hypersalivation <sup>7</sup>
Hypercalcaemia <sup>8</sup>

- <sup>1</sup> Diarrhoea or loose stool may be transient. Supportive treatment can help resolve gastrointestinal signs. In case treatment-related diarrhoea persists, treatment should be discontinued and alternative treatments considered. See also sections "Contraindications" and "Special warnings".
- <sup>2</sup> Polydipsia or polyuria may occur as part of the underlying disease or may be enhanced due to the osmotic effect of velagliflozin.
- <sup>3</sup> Weight loss may occur as part of the underlying disease. An initial weight loss may occur due to the glucosuric effect of velagliflozin. If weight loss persists, screening for DKA should be performed. See also sections "Contraindications" and "Special warnings".

- <sup>4</sup> Severe dehydration should lead to screening for DKA. Appropriate supportive fluid therapy should be given as needed. See also sections "Contraindications" and "Special warnings".
- <sup>5</sup> Vomiting is usually sporadic and resolves without specific therapy. Acute or more frequent vomiting may also be a sign of clinical DKA or other severe disease conditions and should be investigated accordingly. See also sections "Contraindications" and "Special warnings".
- <sup>6</sup> In case of DKA or diabetic ketonuria: Stop treatment and initiate insulin therapy. See also sections "Contraindications" and "Special warnings".
- <sup>7</sup> Hypersalivation occurs usually only at initial administrations, immediately after dosing, and does not need specific therapy.
- <sup>8</sup> Hypercalcaemia is normally mild with calcium levels staying close to the reference range, and does not need specific therapy.

Reporting adverse events is important. It allows continuous safety monitoring of a product. If you notice any side effects, even those not already listed in this package leaflet or you think that the medicine has not worked, please contact, in the first instance, your veterinarian. You can also report any adverse events to the marketing authorisation holder or the local representative of the marketing authorization holder using the contact details at the end of this leaflet, or via your national reporting system {national system details}.

# 8. Dosage for each species, routes and method of administration

Oral use.

The recommended dose is 1 mg/kg bodyweight administered once daily.

For cats previously treated with insulin/another anti-diabetic medicinal product the dosing regimen is the same. When transitioning from insulin, omit the insulin evening dose from the day before starting the velagliflozin treatment.

# 9. Advice on correct administration

The solution should be drawn using the dosing syringe provided in the package. The syringe fits onto the bottle and has a kg bodyweight scale. The veterinary medicinal product may be administered either directly into the mouth or with a small amount of food.

The veterinary medicinal product should be given at approximately the same time every day. If a dose is missed, it should be given as soon as possible on the same day.

After administration close bottle tightly with the cap.

The syringe can be cleaned with a clean, dry cloth.

The syringe has a kg bodyweight scale with 0.5 kg increments.

The information is available also following this link: info.senvelgo.com/eu



# **10.** Withdrawal periods

Not applicable.

# **11.** Special storage precautions

Keep out of the sight and reach of children.

This veterinary medicinal product does not require any special storage conditions.

Shelf life after first opening the bottle: 6 months.

Do not use this veterinary medicinal product after the expiry date which is stated on the carton and the bottle after Exp. The expiry date refers to the last day of that month.

# **12.** Special precautions for disposal

Medicines should not be disposed of via wastewater or household waste. Use take-back schemes for the disposal of any unused veterinary medicinal product or waste materials derived thereof in accordance with local requirements and with any national collection systems applicable. These measures should help to protect the environment. Ask your veterinary surgeon how to dispose of medicines no longer required.

# **13.** Classification of veterinary medicinal products

Veterinary medicinal product subject to prescription.

# 14. Marketing authorisation numbers and pack size

#### EU/2/23/305/001-002

Cardboard box with one bottle of either 12 ml or 30 ml and one oral dosing syringe.

# 15. Date on which the package leaflet was last revised

Detailed information on this veterinary medicinal product is available in the Union Product Database (https://medicines.health.europa.eu/veterinary).

# 16. Contact details

Marketing authorisation holder and manufacturer responsible for batch release: Boehringer Ingelheim Vetmedica GmbH 55216 Ingelheim/Rhein Germany

Local representatives and contact details to report suspected adverse reactions:

#### België/Belgique/Belgien

Boehringer Ingelheim Animal Health Belgium SA Avenue Arnaud Fraiteurlaan 15-23, 1050 Bruxelles/Brussel/Brüssel Tél/Tel: + 32 2 773 34 56 Lietuva Boehringer Ingelheim RCV GmbH & Co KG Lietuvos filialas Dr. Boehringer Gasse 5-11 A-1121 Vīne Tel: +370 5 2595942

#### Република България

Boehringer Ingelheim RCV GmbH & Co KG Dr. Boehringer Gasse 5-11 A-1121 Виена Tel: +359 2 958 79 98

#### Česká republika

Boehringer Ingelheim spol. s r.o. Purkyňova 2121/3 CZ - 110 00, Praha 1 Tel: +420 234 655 111

#### Danmark

Boehringer Ingelheim Animal Health Nordics A/S Weidekampsgade 14 DK-2300 København S Tlf: + 45 3915 8888

#### Deutschland

Boehringer Ingelheim Vetmedica GmbH 55216 Ingelheim/Rhein Tel: 0800 290 0 270

#### Eesti

Boehringer Ingelheim RCV GmbH & Co KG Eesti filiaal Dr. Boehringer Gasse 5-11 A-1121 Viin Tel: +372 612 8000

#### Ελλάδα

Boehringer Ingelheim Vetmedica GmbH D-55216 Ingelheim/Rhein Τηλ: +30 2108906300

#### España

Boehringer Ingelheim Animal Health España, S.A.U. Prat de la Riba, 50 08174 Sant Cugat del Vallès (Barcelona) Tel: +34 93 404 51 00

#### France

Boehringer Ingelheim Animal Health France, SCS 29, avenue Tony Garnier 69007 Lyon Tél : +33 4 72 72 30 00

#### Luxembourg/Luxemburg

Boehringer Ingelheim Animal Health Belgium SA Avenue Arnaud Fraiteurlaan 15-23, 1050 Bruxelles/Brussel/Brüssel Tél/Tel: + 32 2 773 34 56

#### Magyarország

Boehringer Ingelheim RCV GmbH & Co KG Magyarországi Fióktelep Lechner Ö. Fasor 10. H-1095 Budapest Tel: +36 1 299 8900

#### Malta

Boehringer Ingelheim Vetmedica GmbH D-55216 Ingelheim/Rhein Tel: +353 1 291 3985

#### Nederland

Boehringer Ingelheim Animal Health Netherlands bv Basisweg 10 1043 AP Amsterdam Tel: +31 20 799 6950

#### Norge

Boehringer Ingelheim Animal Health Nordics A/S Weidekampsgade 14 DK-2300 København S Tlf: +47 66 85 05 70

#### Österreich

Boehringer Ingelheim RCV GmbH & Co KG Dr. Boehringer Gasse 5-11 A-1121 Wien Tel: +43 1 80105-6880

#### Polska

Boehringer Ingelheim Sp. z o.o. ul. Józefa Piusa Dziekonskiego 3 00-728 Warszawa Tel.: + 48 22 699 0 699

#### Portugal

Boehringer Ingelheim Animal Health Portugal, Unipessoal, Lda. Avenida de Pádua, 11 1800-294 Lisboa Tel: +351 21 313 5300 Hrvatska Boehringer Ingelheim RCV GmbH & Co KG Dr. Boehringer Gasse 5-11 A-1121 Beč Tel: +385 1 2444 600

#### Ireland

Boehringer Ingelheim Vetmedica GmbH D-55216 Ingelheim/Rhein Tel: +353 1 291 3985

#### Ísland

Vistor Hörgatún 2 210 Garðabær Sími: + 354 535 7000

#### Italia

Boehringer Ingelheim Animal Health Italia S.p.A. Via Vezza d'Oglio, 3 20139 Milano Tel: +39 02 53551

#### Κύπρος

Boehringer Ingelheim Vetmedica GmbH D-55216 Ingelheim/Rhein Τηλ: +30 2108906300

#### Latvija

Boehringer Ingelheim RCV GmbH & Co KG Latvijas filiāle Dr. Boehringer Gasse 5-11 A-1121 Viena Tel: +371 67 240 011

#### România

Boehringer Ingelheim RCV GmbH & Co KG Sucursala București Dr. Boehringer Gasse 5-11 A-1121 Viena Tel: +40 21 302 28 00

#### Slovenija

Boehringer Ingelheim RCV GmbH & Co KG Podružnica Ljubljana Dr. Boehringer Gasse 5-11 A-1121 Dunaj Tel: +386 1 586 40 00

#### Slovenská republika

Boehringer Ingelheim RCV GmbH & Co KG, o.z. Dr. Boehringer Gasse 5-11 A-1121 Viedeň Tel: +421 2 5810 1211

#### Suomi/Finland

Vetcare Oy PL/PB 99 24101 Salo Puh/Tel: + 358 201443360

#### Sverige

Boehringer Ingelheim Animal Health Nordics A/S Weidekampsgade 14 DK-2300 København S Tel: +46 (0)40-23 34 00

#### **United Kingdom (Northern Ireland)**

Boehringer Ingelheim Vetmedica GmbH D-55216 Ingelheim/Rhein Tel: +353 1 291 3985